

## SECTION FIVE - ESP Exemption and Incentives for Adopting New Technology

Perhaps the most significant shortcoming of existing service arrangements provided to ISPs is the flat rate per month. For about \$17 per month, an ISP can utilize lines from the public switched network that can be literally filled to capacity. Increasingly, ISPs are moving to charge their subscribers flat rate prices as competition within their industry accelerates. Flat rate prices, and the nature of on-line communications has resulted in call characteristics for computer-type "calls" which vary significantly from traditional voice calls. The flat rate price encourages users to connect, and stay connected throughout the day (and evening). Applications such as voice over the Internet can be most effective if the user's Internet connection stays on all the time. In effect, a circuit-switched architecture has been converted to a private line - as a result of the pricing signal we are sending. Neither end users nor ISPs have sufficient incentive to utilize public switched network resources efficiently.

Another consequence of today's pricing signal is to retard the adaptation of more appropriate technologies. Since data transmissions are generally more tolerant of minor delays than voice services, a packet technology is particularly well suited to the transmission of Internet-type communications. [REDACTED] has introduced a service called [REDACTED] which utilizes SMDS to transport calls. In addition to providing more efficient transport of Internet-type calls, this service would assist the circuit-switched network used for voice calls by alleviating congestion at the central offices that serve ISPs. With [REDACTED] traffic will be

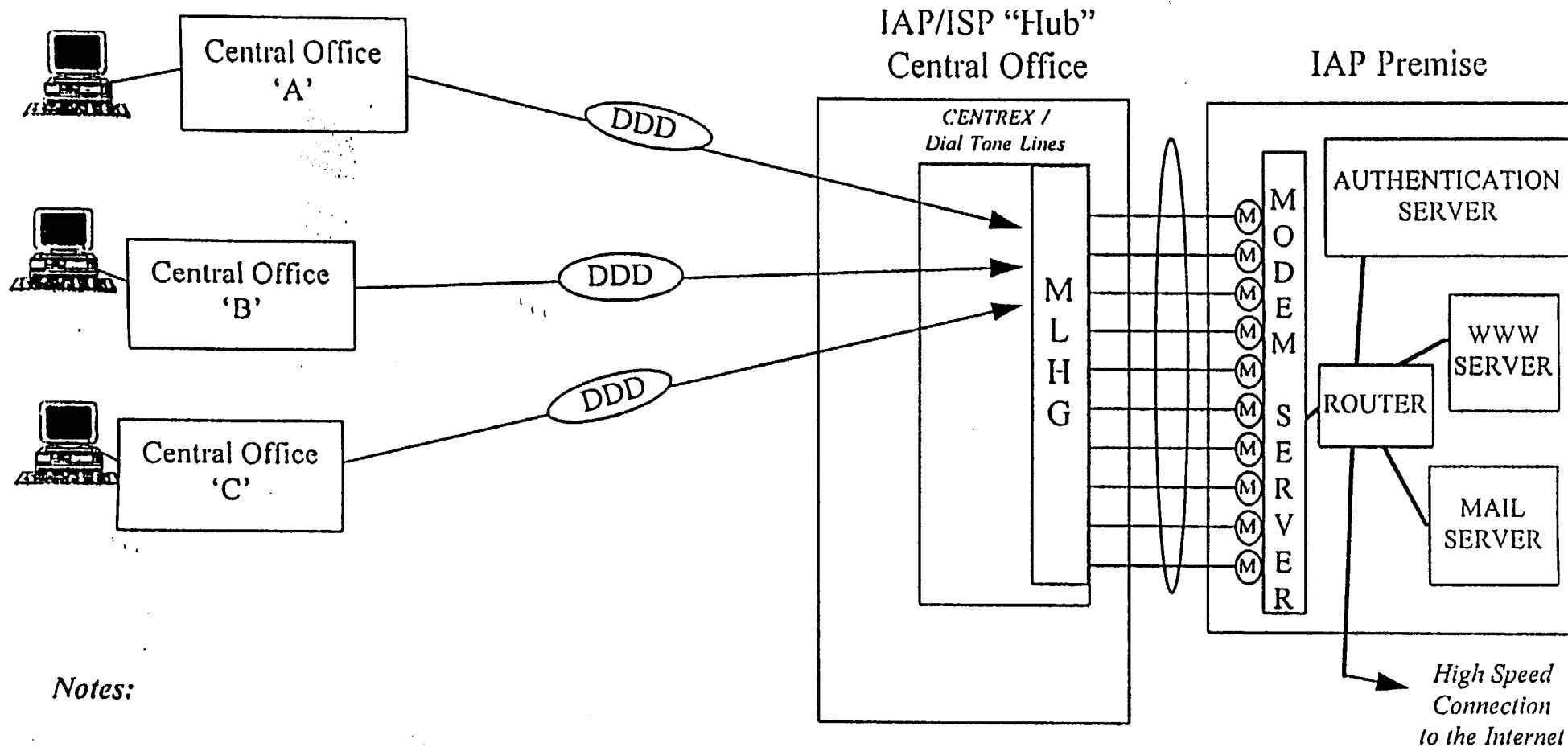
collected at many originating end offices and transported directly to ISP offices. Other technologies are on the drawing board which could both provide better service to end users, and help alleviate congestion on the public switched network.

However, as long as current pricing arrangements are in effect (i.e. the ESP exemption), the time it takes for these technologies to be adopted is artificially lengthened. The ISPs in our traffic study generated on March 13 (the same day selected for the graphs attached to this report) 608 minutes of use per line over the 24 hour period. Based on payment of \$17 per month per line, the ISPs pay 56 cents per day, or \$.0009 per minute of use. This contrasts with [REDACTED] interstate switched access charge of approximately 2 cents per minute. In effect, ISPs are paying 1/22 of the equivalent per minute rate paid by IXC's during a business day. At these levels, ISPs would have little incentive to adopt voluntarily alternative forms of access.

A usage sensitive price (related to the traffic sensitive costs in our local network) is needed to send the appropriate signal to use the public switched telephone network efficiently. However, we recognize that this price must be at a level which does not cause disruption in the industry. As stated at the outset of this report, [REDACTED] will work with the Commission and industry participants to come up with pricing options that help to moderate existing cross subsidies, and help send the type of economic signal that will aid in allowing the faster adaptation of technologies which will help alleviate growing congestion on the local telephone network, but which will also not lead to undue disruption in the industry.

As an important first step, we applaud the Commission's invitation to provide this information which establishes the dimensions of the problems we are experiencing, and we encourage the Commission to take the next step of requesting broader input. The problems we have experienced thusfar, while severe in our view, have not been recognized by the public at large. Given the rapid, and almost volatile, growth of traffic related to serving ISPs, however, it is not difficult to envision scenarios whereby traffic surges might occur which would overwhelm the ability of local networks to sustain service. Service interruptions of even a temporary length could affect public safety services such as 911 service, with unthinkable consequences. Therefore it is important for the Commission to address quickly the issues raised in this report.

# Using the DDD Network to Connect Incoming Callers to an ----- Attachment 1 Internet Access Provider

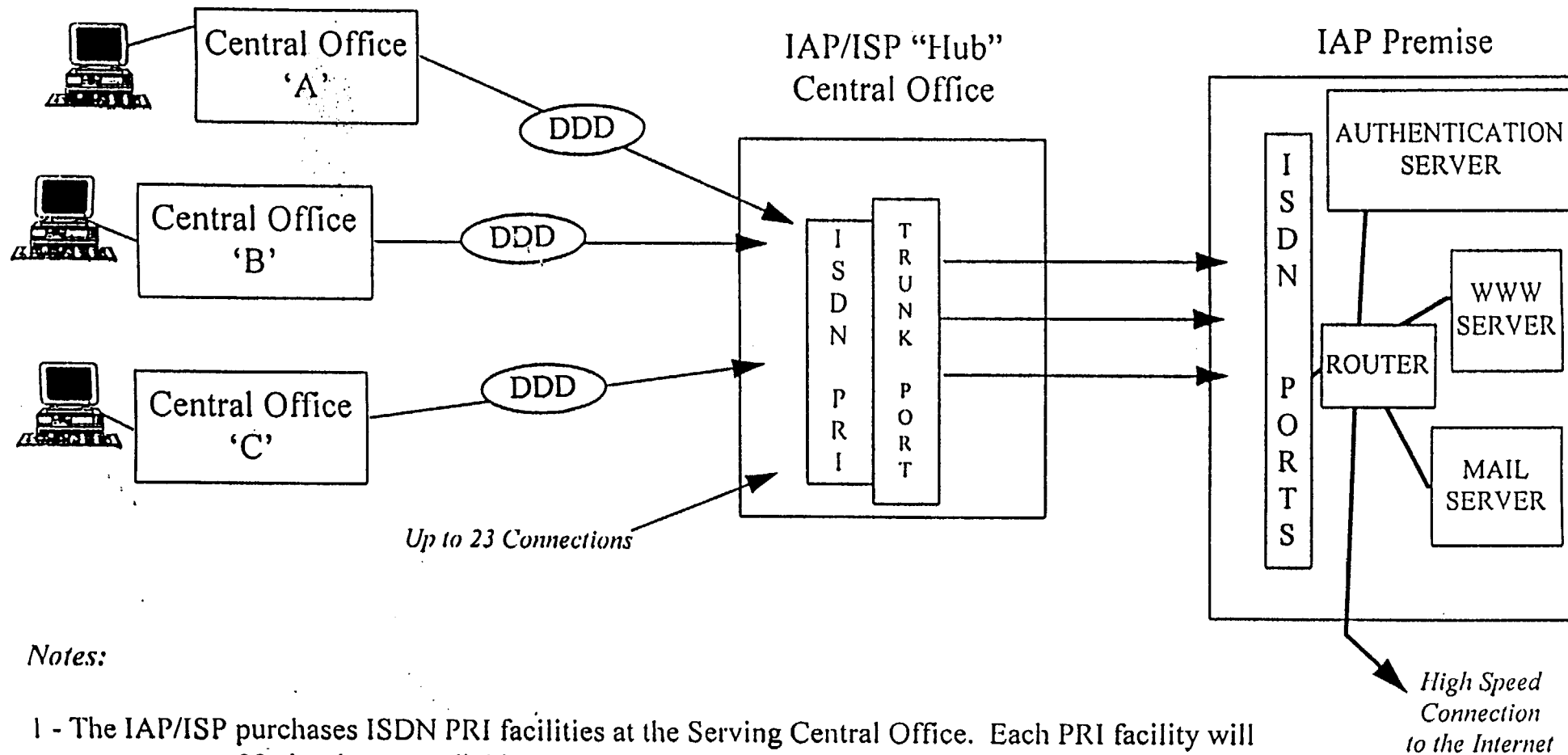


## Notes:

1 - The IAP/ISP usually purchases *CENTREX* or Dial Tone Lines at the Serving Central Office, placing all of the modem access lines in a large, single lead number accessible, Multi-Line Hunt group (MLHG). The number of lines in the MLHG is set to provide a predictable level of service during the IAP/ISP's busy hour.

2- The IAP/ISP's customers would pay any applicable network usage charges. Since many customers call over flat rated facilities, most often there are no usage charges involved.

*Access to Internet Access Provider via ----- Attachment 2*  
*ISDN Primary Rate (PRI) Service*

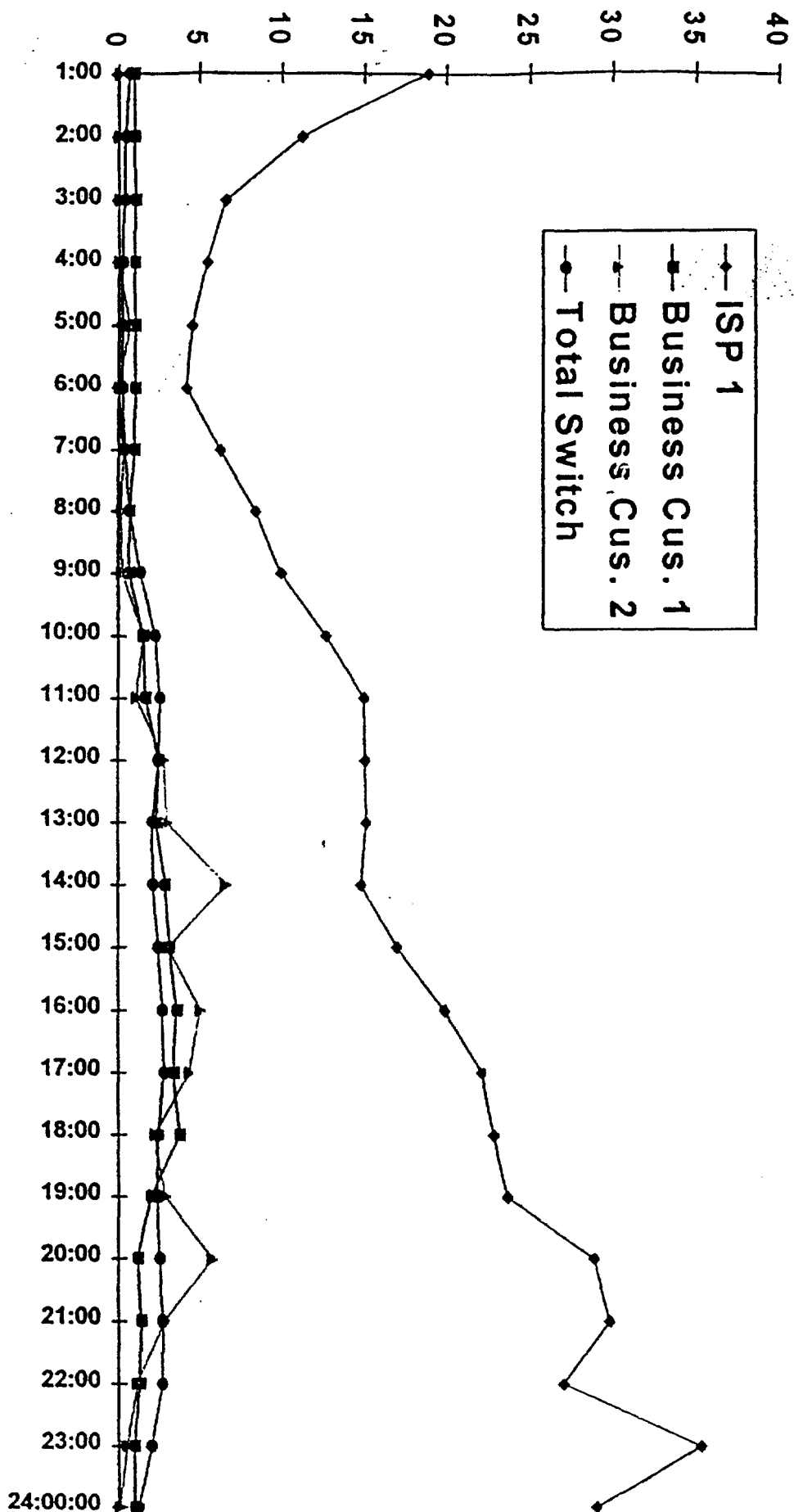


*Notes:*

- 1 - The IAP/ISP purchases ISDN PRI facilities at the Serving Central Office. Each PRI facility will support up to 23 simultaneous dial in analog or ISDN Basic Rate Interface connections with the 24th channel providing signaling. Additional PRIs used in a hunt group can support 24 simultaneous calls each.
- 2 - The IAP/ISP's customers would pay any applicable network usage charges. Since many customers call over flat rated facilities, most often there are no usage charges involved.

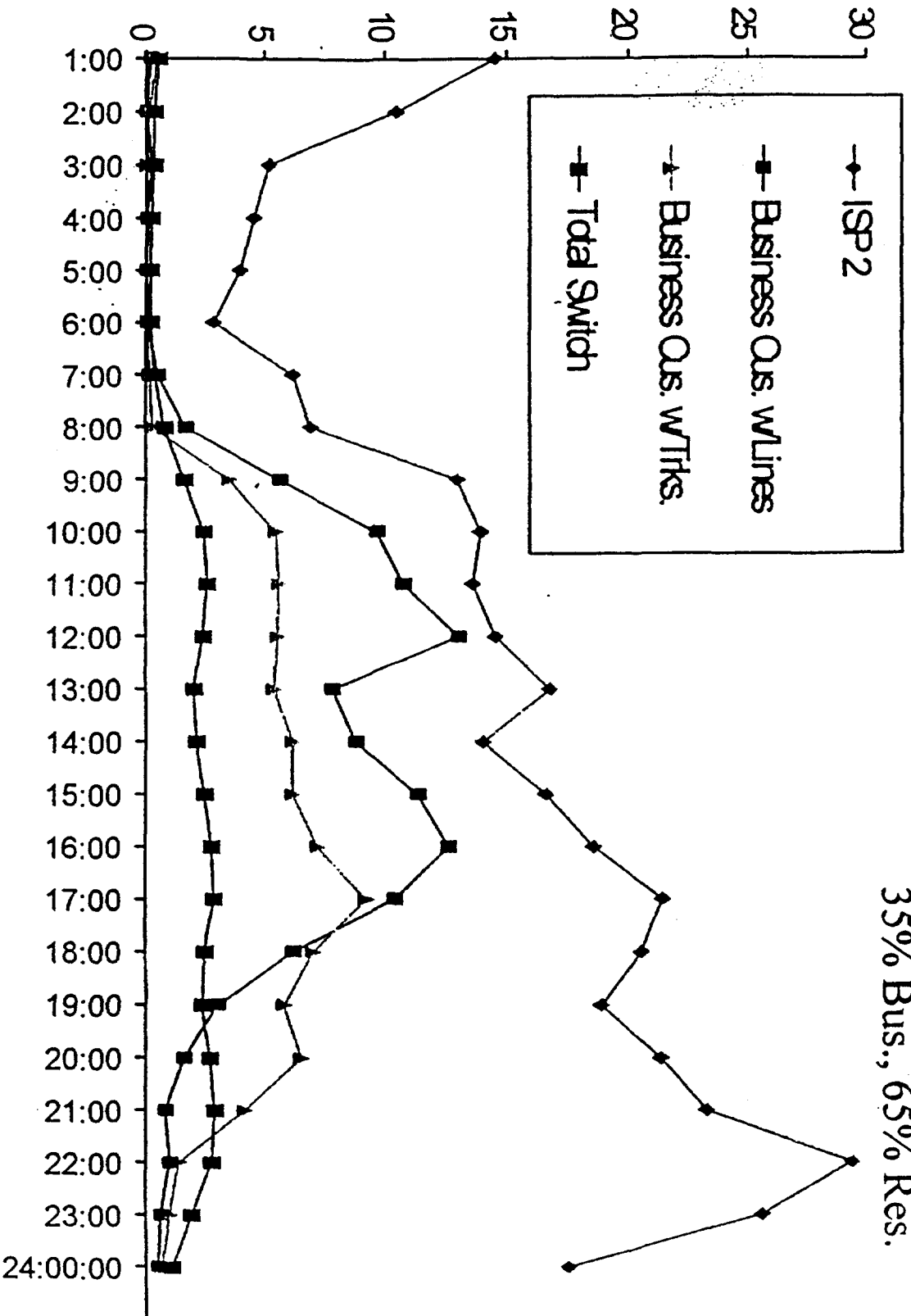
Office A 3-13-96

Busy Hour = 16:00  
33% Bus., 67% Res.



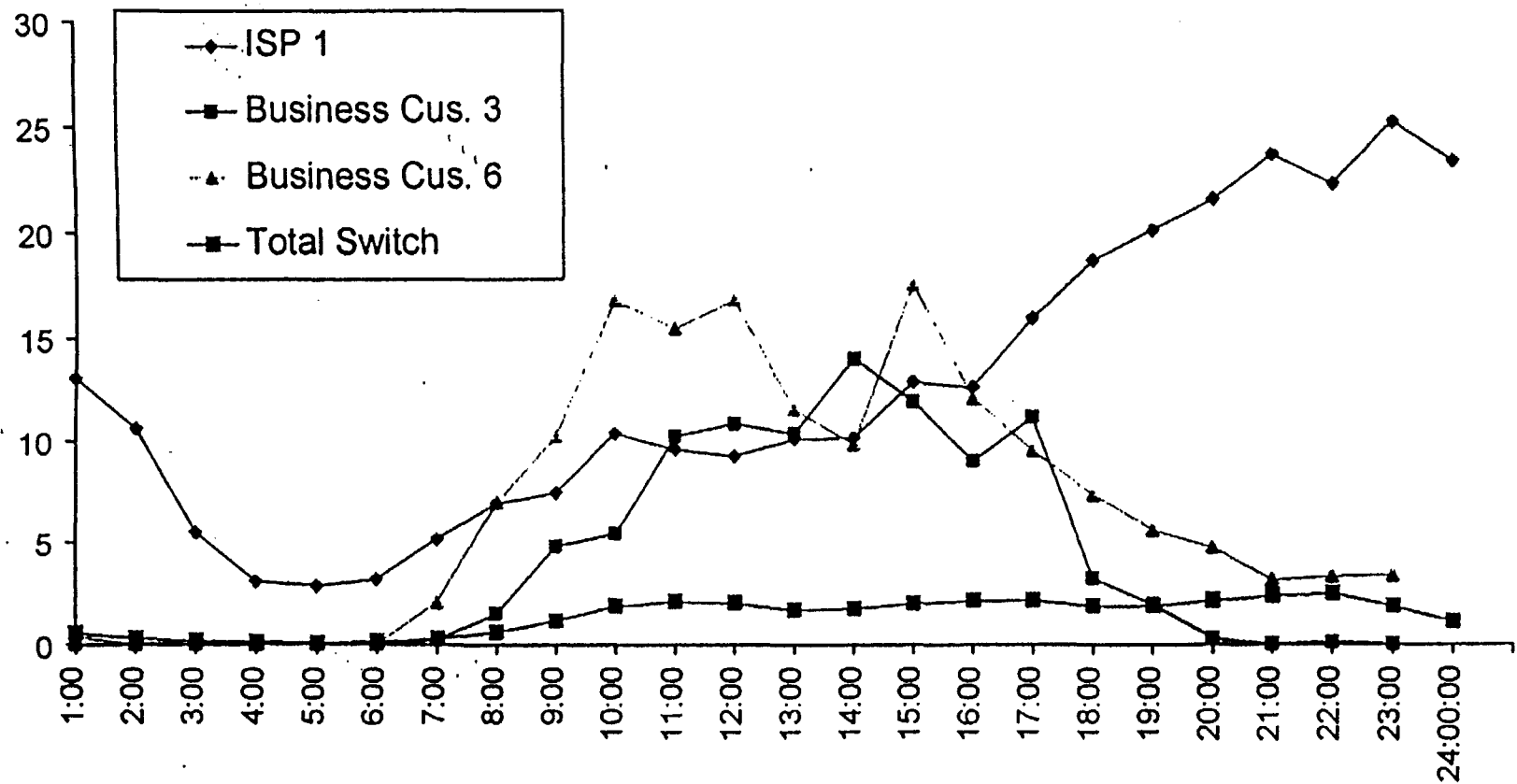
# Office B 3-13-96

Busy Hour = 16:00  
35% Bus., 65% Res.



## Office C 3-13-96

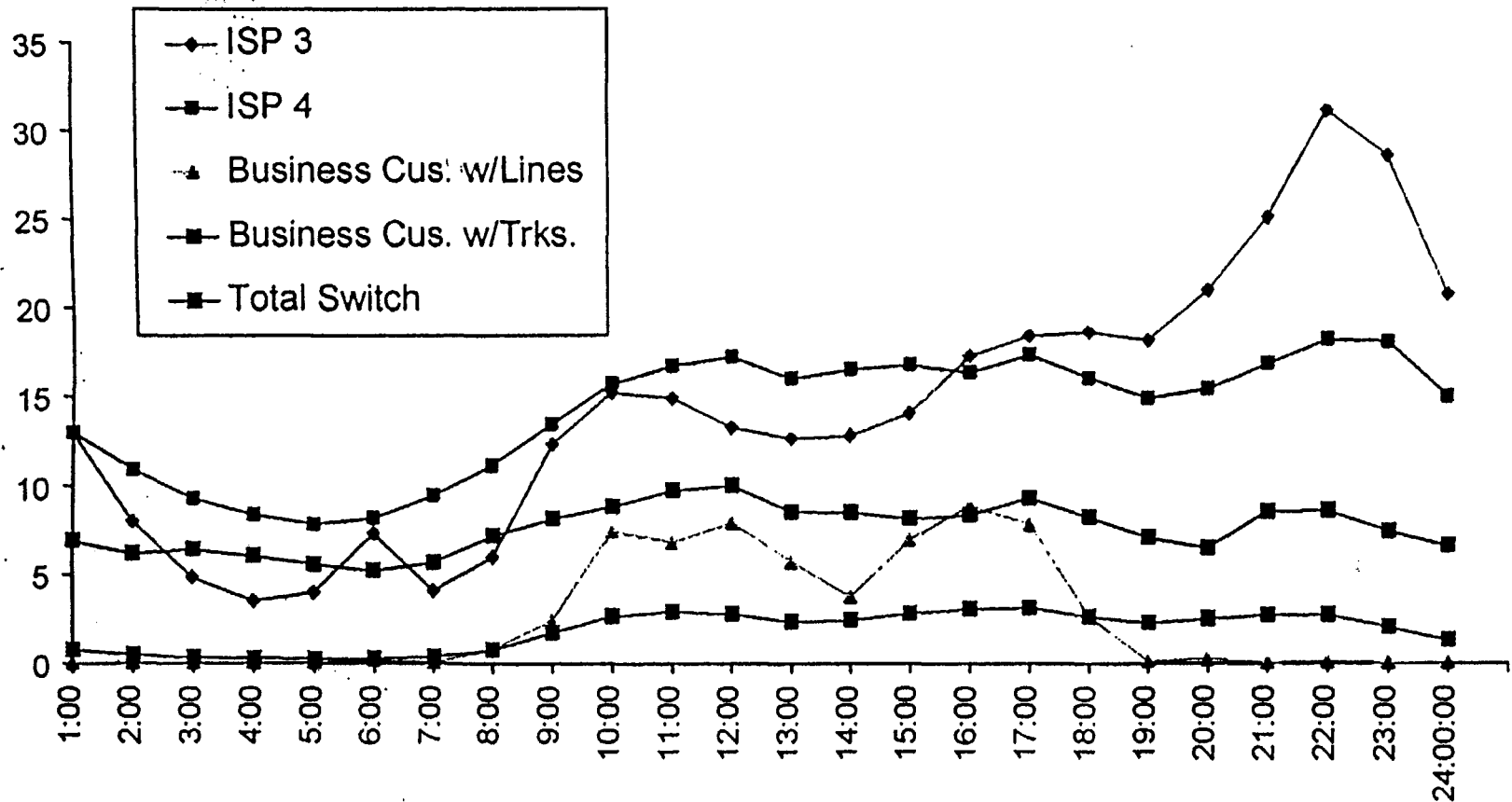
Busy Hour = 16:00  
40% Bus., 60% Res.





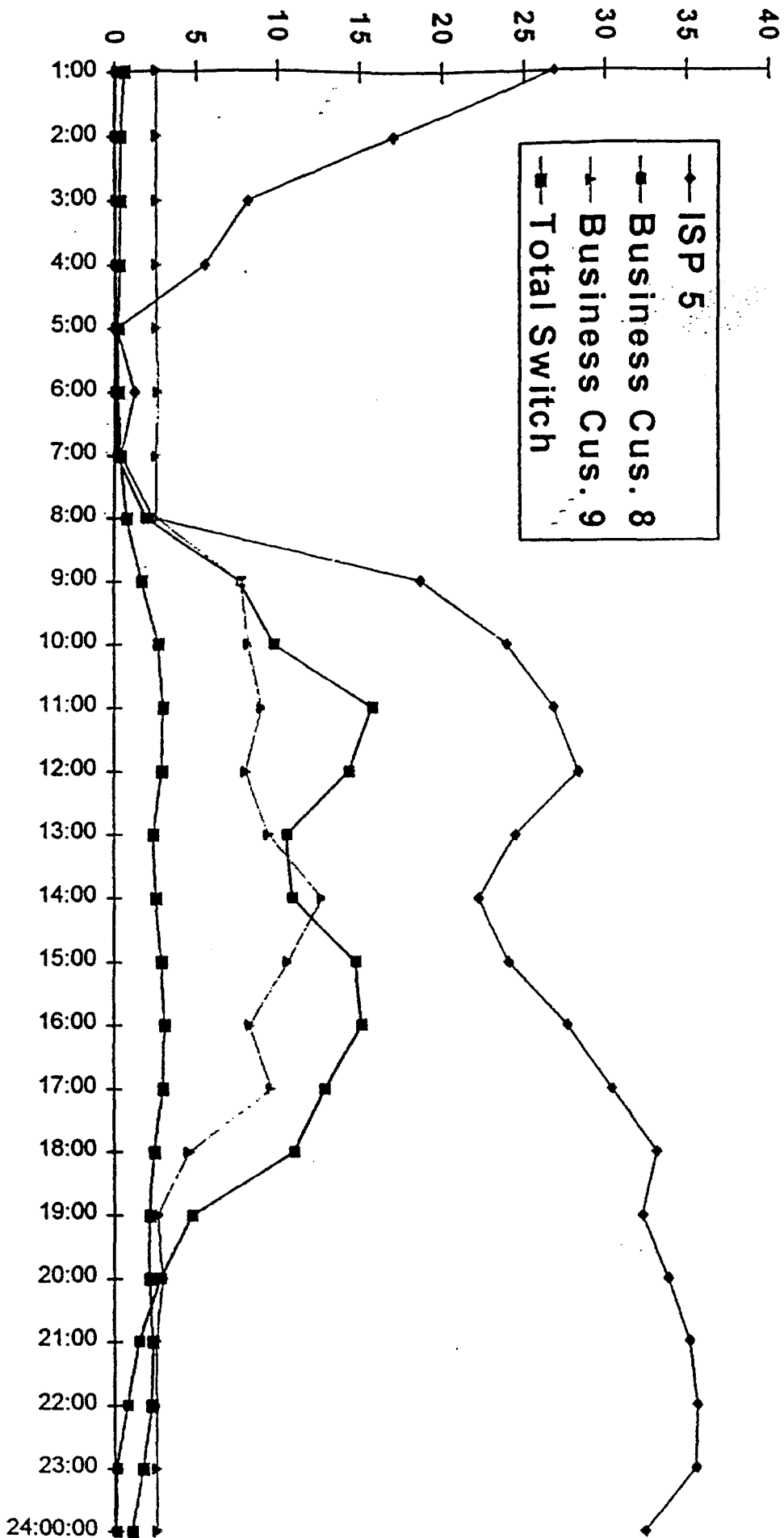
## Office D 3-13-96

Busy Hour = 16:00  
40% Bus., 60% Res.



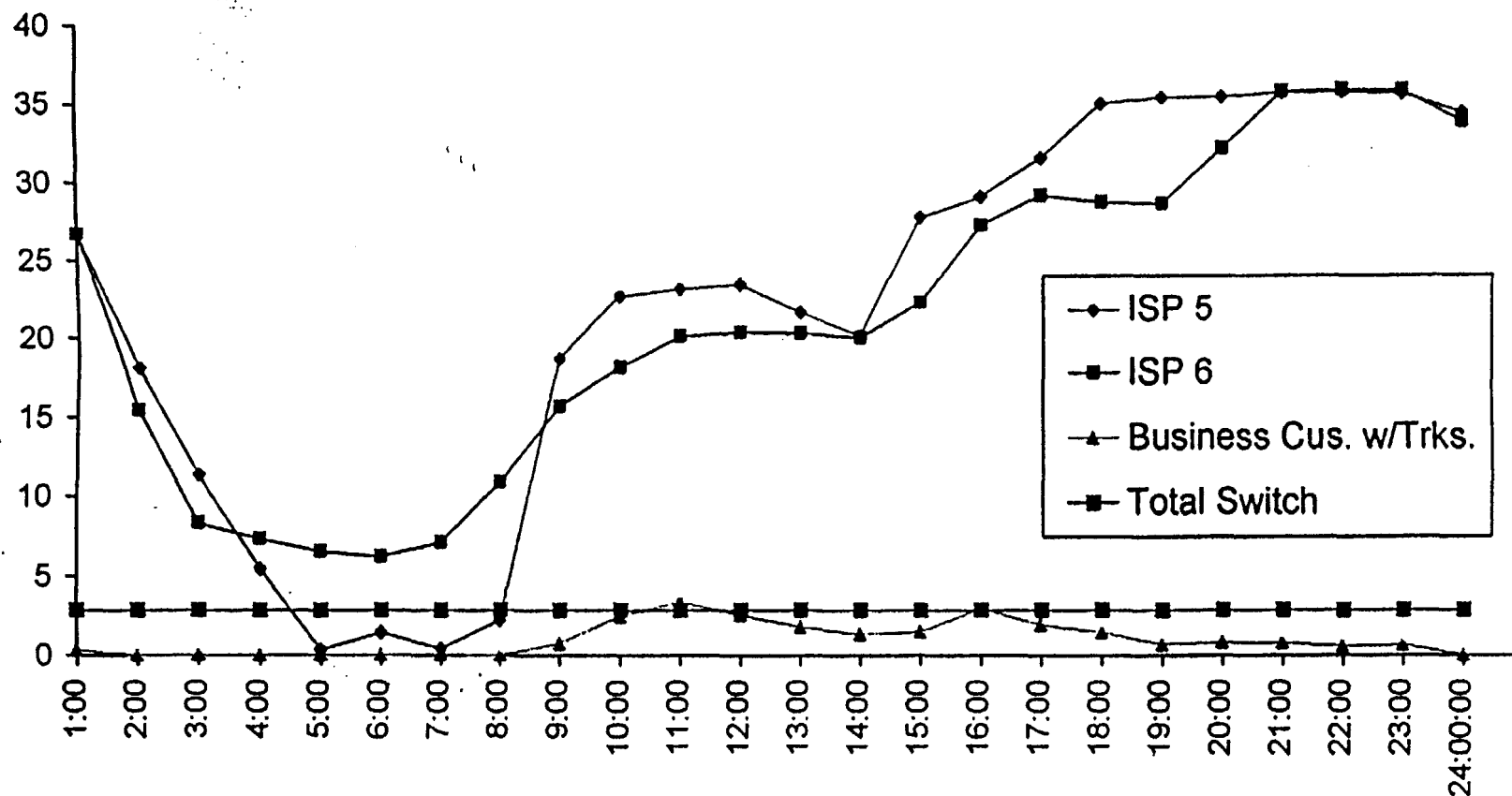
Office E - 3-13-96

Busy Hour = 16:00  
50% Bus., 50% Res.



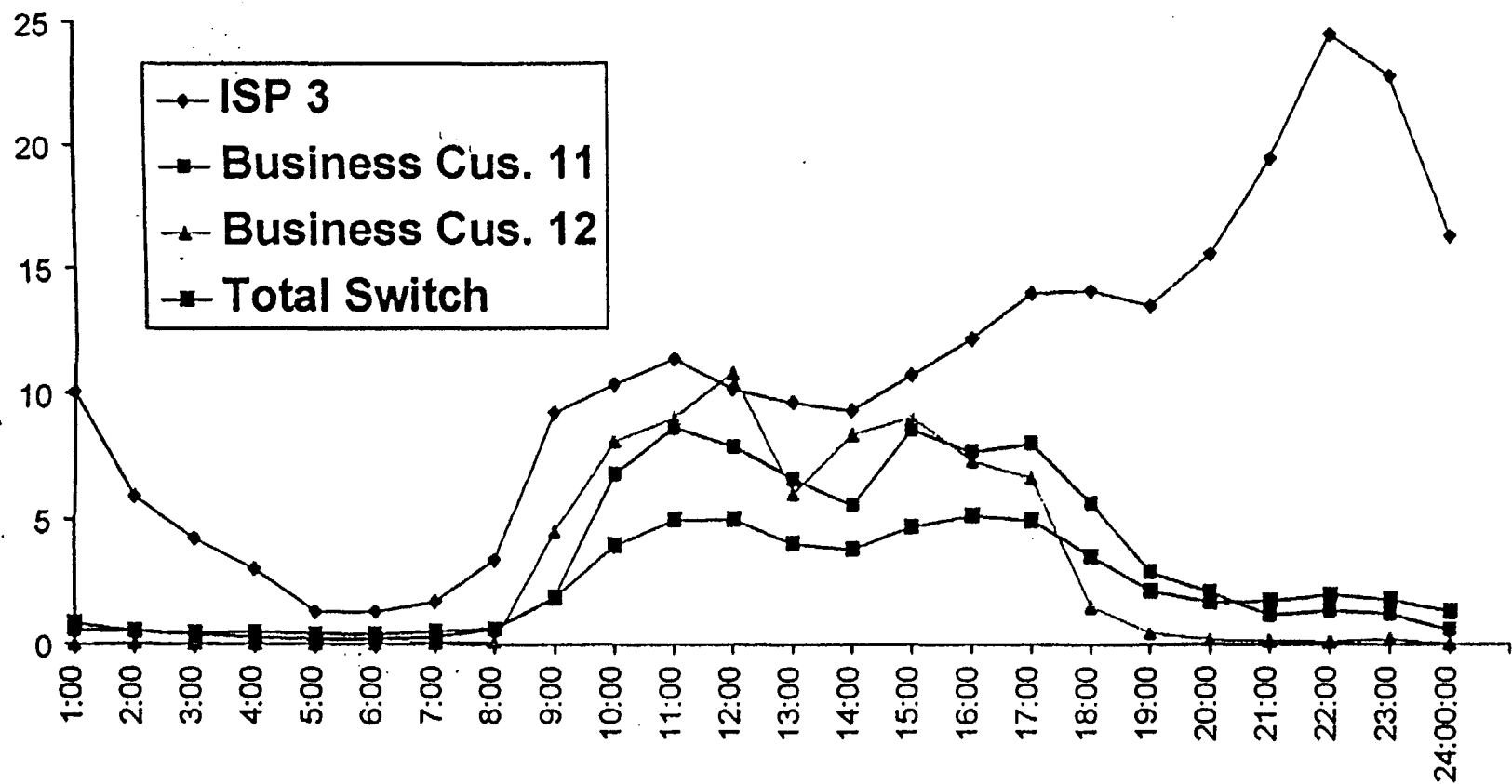
## Office F 3-13-96

Busy Hour = 12:00  
100% Bus., 0% Res.



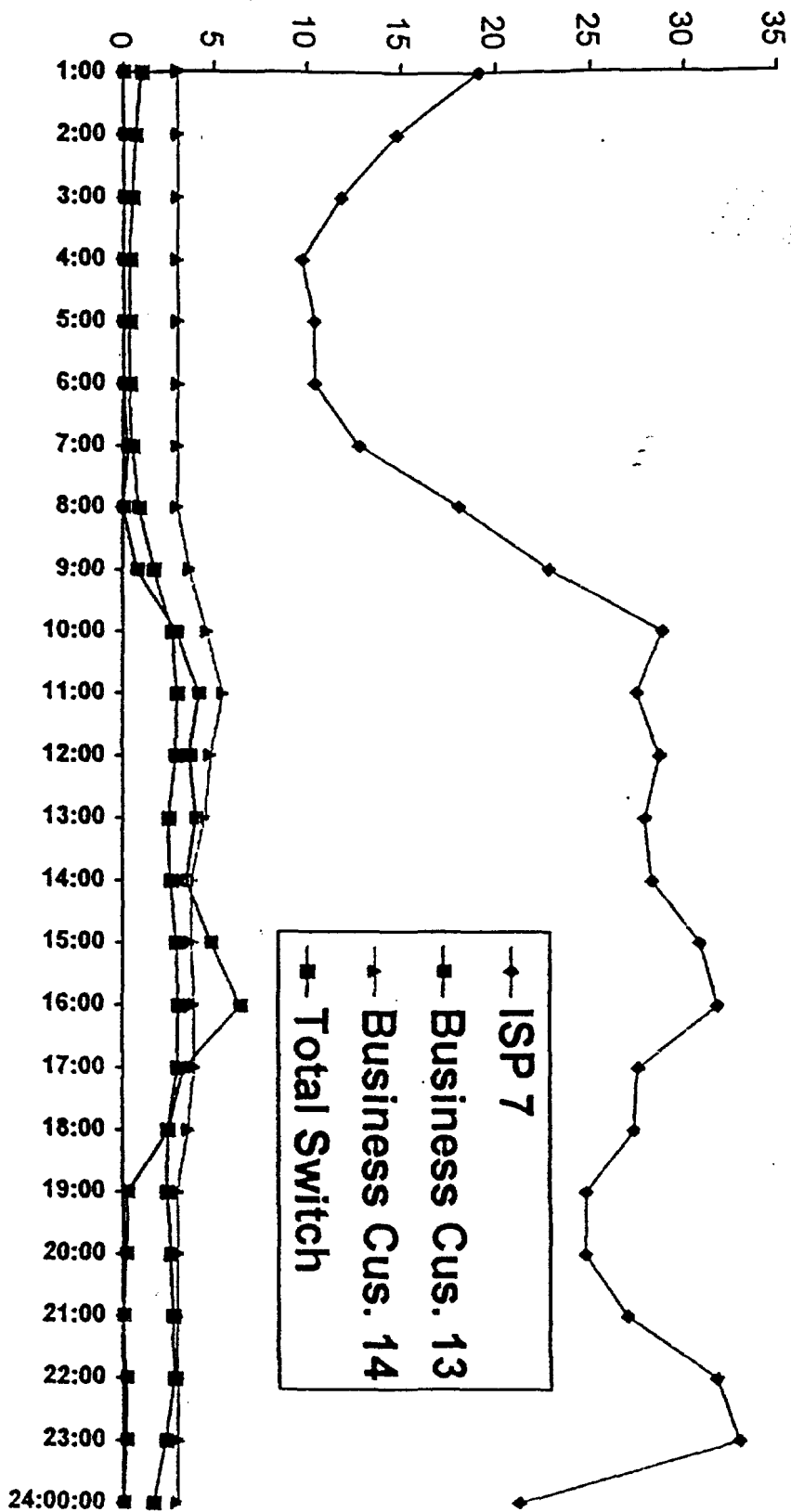
## Office G 3-13-96

Busy Hour = 12:00  
100% Bus., 0% Res.



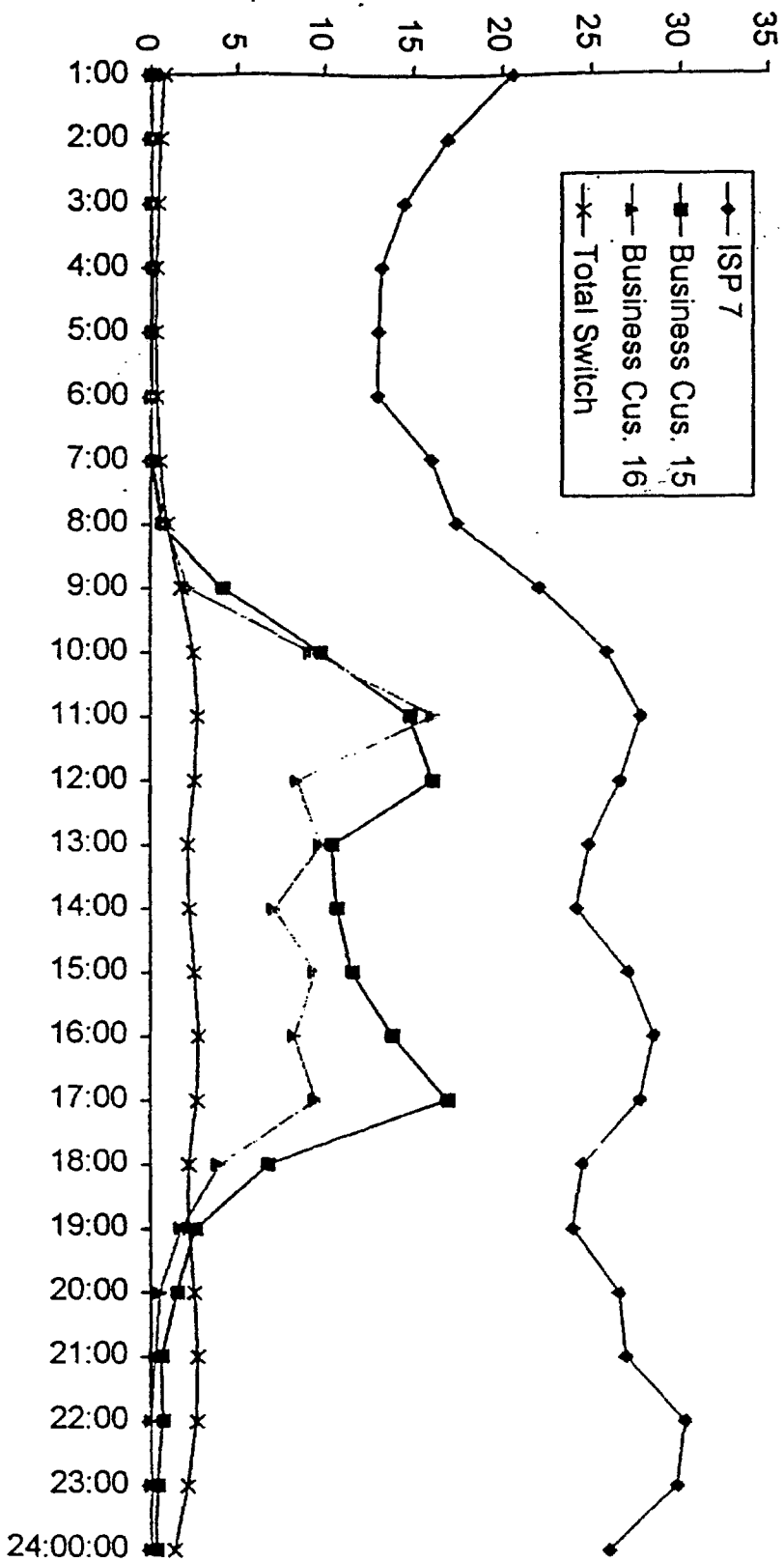
Office H 3-13-96

Busy Hour = 16:00  
47% Bus., 53% Res.



Office 1 3-13-96

Busy Hour = 16:00  
37% Bus., 63% Res.



# COMPOSITE GRAPH FOR ALL 28 DAYS

